^{177}Pt ε decay 1993Me13

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 159, 1 (2019)	30-Aug-2019

Parent: ^{177}Pt: E=0.0; J^π=5/2$^-$; $T_{1/2}$=10.0 s *4*; Q(ε)=6677 *25*; %ε+%β^+ decay=94.3 *5*

1993Me13: ^{177}Pt source produced using ^{146}Nd(^{36}Ar,5n) reaction. Projectile: ^{36}Ar, E=173− 201 MeV (in the middle of the target). Target: ^{146}Nd, 2.3 mg/cm^2 thick. Detectors: an array of α-, γ- and x-ray detectors. Measured: Eγ, Iγ, $\gamma\gamma$ coin, parent $T_{1/2}$. See also 1993MeZZ.

^{177}Ir Levels

E(level)[†]	J^π[‡]	$T_{1/2}$[‡]
0.0[#]	5/2$^-$	29.8 s *17*
85.40[#] *17*	(1/2$^-$)	
148.00[#] *20*	(3/2$^-$)	
157.20[@] *17*	(3/2$^+$)	
223.10[#] *20*	7/2$^-$	
331.4 *3*		

[†] From a least-squares fit to Eγ.
[‡] From Adopted Levels.
[#] π 1/2[541] ($h_{9/2}$).
[@] π 3/2[402]? ($d_{3/2}$).

$\gamma(^{177}Ir)$

Iγ normalization: The decay scheme is incomplete and the intensity of the ground state to ground state decay branch is not known. Thus, no normalization to absolute γ-ray intensities and calculations of log *ft* values were carried out.

E$_\gamma$[†]	I$_\gamma$[†]	E$_i$(level)	J_i^π	E$_f$	J_f^π	Comments
[x]65.0[‡]						I$_\gamma$: Weak γ ray. E$_\gamma$: Overlaps with the Ir Kα_1 x ray.
71.8[‡] *2*		157.20	(3/2$^+$)	85.40	(1/2$^-$)	I$_\gamma$: Weak γ ray.
[x]75[#]						E$_\gamma$: Overlaps with the Ir Kβ x ray.
85.4 *2*	62 *8*	85.40	(1/2$^-$)	0.0	5/2$^-$	I$_\gamma$: Upper limit. Not corrected for contribution from Pb Kβ_1 x ray.
[x]90[#]						I$_\gamma$: Weak γ ray.
148.0 *2*	100 *13*	148.00	(3/2$^-$)	0.0	5/2$^-$	I$_\gamma$: Corrected for contribution from ^{177}Ir ε decay.
157.2 *2*	24 *4*	157.20	(3/2$^+$)	0.0	5/2$^-$	
183.4 *2*	9 *3*	331.4		148.00	(3/2$^-$)	
223.1 *2*	52 *8*	223.10	7/2$^-$	0.0	5/2$^-$	

[†] From 1993Me13. The Eγ uncertainties are from 1993MeZZ.
[‡] In coincidence with the 85.4 keV γ ray.
[#] In coincidence with the 148.0 keV γ ray.
[x] γ ray not placed in level scheme.

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Decay Scheme

Intensities: Relative I_γ